



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20590
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10 022,181	12 13 2001	Akira Matsumoto	939_035	1080

25191 7590 02 14 2003

BURR & BROWN
PO BOX 7068
SYRACUSE, NY 13261-7068

EXAMINER

KNAUSS, SCOTT A

ART UNIT	PAPER NUMBER
----------	--------------

2874

DATE MAILED: 02 14 2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/022,181

Applicant(s)

MATSUMOTO ET AL.

Examiner

Scott A Knauss

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The corrected or substitute drawings were received on 2/11/02. These drawings are approved.

Claim Objections

3. Claims 1 and 2 are objected to because of the following informalities:

Claims 1 and 2 use the language "bare fibers, asunjacket". This language is not very clear to the examiner, and probably should read "unjacketed bare fibers"

Claims 1 and 2 also recite "v-shaped substrate". This should most likely read "v-grooved substrate" since the substrate shown in fig. 2A of the applicant's specification clearly does not have a "v" shape.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 05-264844 (Ichiki et al.) in view of JP 08-114722 (Fukuchi et al.)

Ichiki discloses a fiber array #20 in which unjacketed bare optical fibers #30 are arrayed in v-shaped grooves (#32) of a v-grooved substrate (#22), wherein fibers for transmitting no optical signal (pressure bearing bars #24, which are constituted of optical fibers - see abstract lines 19-20) are disposed on at least the outermost sides of the array of bare fibers, and disposed over at least the entire length of the fiber array (the fiber array being considered the region on top of the substrate)

Ichiki does not, however, explicitly disclose the use of fibers from a *ribbon-shaped* multi-core line.

Nevertheless, it is well known in the art to place fiber ribbons into fiber arrays of the type disclosed by Ichiki. Fukuchi, in particular, discloses such a configuration in figs. 7a and 7c, wherein a plurality of fibers from a ribbon #5 are placed in V-grooves of

a substrate #1. Such a configuration is used to connectorize optical fiber ribbons to be connected to other optical devices

Therefore it would have been obvious to one of ordinary skill in the art to modify the fiber array disclosed by Ichiki to use a ribbon shaped fiber array in order to connector ribbon shaped arrays to other optical devices. Therefore it would have been obvious to one of ordinary skill in the art to modify the fiber array disclosed by Ichiki to use a ribbon shaped fiber array in order to connect a ribbon shaped array to other optical devices.

Regarding claim 2, Ichiki, as stated above regarding claim 1, discloses all the limitations set forth in the claim, including a fiber array #20 in whichunjacketed bare optical fibers #30 are arrayed in v-shaped grooves (#32) of a v-grooved substrate (#22), and fibers for transmitting no optical signal (pressure bearing bars #24, which are constituted of optical fibers - see abstract lines 19-20) are disposed on at least the outermost sides of the array of bare fibers, and disposed over at least the entire length of the fiber array (the fiber array being considered the region on top of the substrate)

Ichiki does not, however, explicitly disclose the use of fibers from a *ribbon-shaped* multi-core line.

Nevertheless, it is well known in the art to place fiber ribbons into fiber arrays of the type disclosed by Ichiki. Fukuchi, in particular discloses such a configuration in figs. 7a and 7c, wherein a plurality of fibers from a ribbon #5 are placed in V-grooves of a substrate #1. Such a configuration is used to connectorize optical fiber ribbons to be connected to other optical devices

Therefore it would have been obvious to one of ordinary skill in the art to modify the fiber array disclosed by Ichiki to use a ribbon shaped fiber array in order to connect a ribbon shaped arrays to other optical devices.

Ichiki also fails to disclose connecting the fiber array to a waveguide chip and sealing the array in a package.

Such a configuration is also well known in the art. One such example is disclosed by Fukuchi in figures 7 and 9, which show a v-grooved substrate holding optical fibers (#1) connected to a waveguide chip #3, and sealed in a package (#6,#8) Such a configuration is used to connect optical fibers to waveguide devices on a substrate, and, in this case, is used to combine a plurality of signals from a plurality of optical fibers into a single output signal.

Therefore it would have been obvious to one of ordinary skill in the art to modify the fiber array of Ichiki by connecting it to a waveguide chip and sealing it in a package as disclosed by Fukuchi in order to connect the optical fibers to waveguide devices on a substrate, and combine a plurality of signals from a plurality of optical fibers into a single output signal.

Furthermore, the waveguide device disclosed by Ichiki, as modified by Fukuchi, would inherently have the fibers for transmitting no optical signal *inside* the package, and extending to the end of substrate #1 and thus the fibers for transmitting no optical signal would be at least disposed from the fiber array to at least the inner face of the package.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

JP 09-90171 (Hanawa et al.) discloses in fig. 1 a fiber array using dummy fibers (#18,#19), as does JP 03-155503 (Sato, see fig. 1 #21a,b), JP 2002-72016 (Sumitomo Ind., see figs. 1-4, #17), JP 2000-180639 (Hitachi, see fig. 12,#5)

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott A Knauss whose telephone number is (703) 305-5043. The examiner can normally be reached on 9-6 Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (703) 308 - 4819. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0530.

Scott Knauss

Art Unit 2874

sak
February 3, 2003


HEMANG SANGHAV
PRIMARY EXAMINER